

What is claimed is:

1. A headset comprising:

a main body with an attachment structure constructed to attach the headset in an operative position to the head of a user;

a speaker carried by the main body, the speaker being positionable adjacent a user's ear when the headset is attached in the operative position, the speaker being operable to output audible noise based on a speaker input signal transmitted to the speaker;

a microphone boom carried by the main body and having a distal end portion;

a microphone carried on the distal end portion of the microphone boom, the microphone being operable to receive audible noise and transmit a microphone output signal based on the received audible noise;

the microphone boom being movable between a retracted position and an extended position, the distal end portion being positioned further forwardly towards the mouth of the user when the headset is attached to the user's head in the operative position so as to be closer to the user's mouth in the extended position than in the retracted position;

circuitry carried by the main body and connected to the speaker and microphone, the circuitry being operable to transmit and receive signals from a communications device, to transmit the speaker input signal to the speaker, and to receive the microphone output signal from the microphone to thereby establish communication between both the speaker and the microphone and the communications device;

at least one sensor coupled to the circuitry for sensing a position of the microphone boom;

the circuitry being further operable to apply a gain to the microphone output signal, the gain being varied based on the position of the microphone boom as sensed by the at least one sensor such that the gain is greater when the microphone boom is in the retracted position thereof than when the microphone boom is in the extended position thereof.

2. A headset according to claim 1, wherein the extended position of the boom is approximately 1.5 inches forward of the retracted position of the boom.

3. A headset according to claim 2, wherein the gain applied at the retracted position is approximately 6dB greater than the gain applied at the extended position.
4. A headset according to claim 1, wherein the attachment structure is an earhook having a general C-shape configured to fit over a user's ear to attach the headset in the operative position to the head of the user.
5. A headset according to claim 1, wherein the main body has a forwardly facing boom receiving opening and wherein a proximal end portion of said microphone boom is slidably mounted within said boom receiving opening for movement between said retracted and extended positions.
6. A headset according to claim 1, wherein said at least one sensor includes at least one switch coupled to the circuitry.
7. A headset according to claim 6, wherein said at least one switch is a single switch, said single switch switching from a first state when the boom is in one of the extended and retracted positions to a second state when the boom is moved out of said one of the extended and retracted positions.
8. A headset according to claim 7, wherein the at least one switch is in the first state when the boom is in the retracted position and is in the second state when the boom is moved out of the retracted position.
9. A headset according to claim 8, wherein the first state is a closed state wherein a current flows through the switch to indicate that the boom is in the retracted position, and wherein the second state is an open state wherein the current is interrupted to indicate the boom is moved out of the retracted position.

10. A headset according to claim 6, wherein the at least one switch comprises a plurality of switches including at least a first switch and a second switch, the first switch switching from a first state when the boom is in the retracted position to a second state when the boom is moved out of the retracted position, and the second switch switching from a first state when the boom is in the extended position to a second state when the boom is moved out of the extended position.

11. A headset according to claim 10, wherein the first state of each of the first and second switches is a closed state wherein a respective current flows through the respective switch to indicate that the boom is in the respective retracted or extended position, and wherein the second state of each of the first and second switches is an open state wherein the respective current is interrupted to indicate the boom is moved out of the respective extended or retracted position.

12. A headset according to claim 9, wherein the boom carries a metallic element on the proximal end portion thereof and wherein the switch includes a pair of spaced apart terminals to which the current is applied, the metallic element contacting the two terminals to connect the two terminals together and establish the closed state when the boom is in the retracted position thereof, the metallic element being moved out of contact with the two terminals to disconnect the terminals and establish the open state when the boom is moved out of the retracted position thereof.

13. A headset according to claim 12, wherein said terminals are provided on a detent structure and wherein the metallic element is a leaf spring that engages the detent structure to releasably retain the boom in the retracted position thereof.

14. A headset according to claim 11, wherein the boom carries a metallic element on the proximal end portion thereof and wherein each of the first and second switches includes a pair of spaced apart terminals to which the respective current is applied, the metallic element contacting the respective two terminals to connect the respective two terminals together and establish the respective closed state when the boom is in the respective retracted or extended

position thereof, the metallic element being moved out of contact with the respective two terminals to disconnect the terminals and establish the respective open state when the boom is moved out of the respective retracted or extended position thereof.

15. A headset according to claim 14, wherein the terminals of the first switch are provided on a retracted position detent structure and wherein the metallic element is a leaf spring that engages the retracted position detent structure to releasably retain the boom in the retracted position thereof.

16. A headset according to claim 15, wherein the terminals of the second switch are provided on an extended position detent structure and wherein the leaf spring engages the extended position detent structure to releasably retain the boom in the extended position thereof.

17. A method for reducing background noise in a microphone output signal in a headset, the headset comprising a main body; a microphone boom carried by the main body and having a distal end portion; a microphone carried on the distal end portion of the microphone boom, the microphone being operable to receive audible noise and transmit a microphone output signal based on the received audible noise; the microphone boom being movable between a retracted position and an extended position, the distal end portion being positioned further forwardly towards the mouth of the user when the headset is attached to the user's head in the operative position so as to be closer to the user's mouth in the extended position than in the retracted position; the method comprising:

sensing a position of the microphone boom;

applying a gain to the microphone output signal, the gain being varied based on the sensed position of the microphone boom such that the gain is greater when the microphone boom is in the retracted position thereof than when the microphone boom is in the extended position thereof.